

## FEEDFORWARD AMPLITUDE CANCELLATION TOPOLOGY FOR MULTI-CARRIER APPLICATIONS

### ABSTRACT OF THE DISCLOSURE

A multi-carrier receiver system and method for receiving a transmission frequency multi-carrier signal include a feedforward cancellation loop. A frequency conversion circuit generates an intermediate frequency (IF) multi-carrier signal based on the transmission frequency multi-carrier signal. The feedforward cancellation loop generates an amplitude corrected multi-carrier signal based on the IF multi-carrier signal such that the amplitude corrected multi-carrier signal has a reduced dynamic range with respect to the IF multi-carrier signal. A primary A/D converter having a significantly lower dynamic range requirements can therefore generate a digital multi-carrier signal based on the amplitude corrected multi-carrier signal. The feedforward cancellation loop therefore enables the primary A/D converter to process multi-carrier signals without the need for large dynamic range requirements.